

PCB SAMPLER

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CLAIMS

10 We claim:

1. A sample collector assembly comprising

(i) a frame forming a sampling enclosure with a sampler opening;

(ii) a mirror and lens control assembly mounted to said frame and in
15 communication with said sampling enclosure, for focusing a laser beam onto a
sample through said sampler opening and vaporizing an analyte from a
sample;

(iii) an absorbent trap mounted to said frame and in communication
with said sampling enclosure;

(iv) a gas moving system mounted to said frame for providing a flow
20 of gas to said sampling enclosure for moving vaporized analyte to said
absorbent trap;

2. The sample collector assembly according to claim 1, wherein said sample
25 collector includes a quick disconnect for mounting and removal of said
absorbent trap.

3. The sample collector assembly according to claim 1, wherein said sample
collector includes a magnetic holder for holding the sample collector against a
30 magnetic surface.

4. The sample collector assembly according to claim 1, wherein a heater is
mounted to said frame for heating said frame and sampling enclosure.

5. The sample collector assembly according to claim 1, wherein one or more thermocouples are mounted to said frame for controlling temperature in the sample collector assembly.

5 6. A method for collecting samples for analysis of impurities in or on a sample comprising:

A. irradiating a sample area with laser energy sufficient to vaporize an analyte or break down a material containing an analyte and vaporizing the analyte; and

10 B. sweeping said vaporized analyte into an absorbent trap.

7. The method according to claim 101, comprising the additional steps of C. placing the absorbent trap into a thermal desorber and heating the absorbent trap to vaporize the analyte; and

15 D. measuring the vaporized analyte.

8. The method according to claim 102, wherein the vaporized analyte is measured by GC-MS, GC, I.R. analysis or nuclear techniques.

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